

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously Presented) A permselective asymmetric hollow fiber membrane suitable for hemodialysis comprising at least one hydrophobic polymer and at least one hydrophilic polymer, wherein an outer surface of the hollow fiber membrane has pores having sizes in the range of 0.5-3 μm , the density of said pores on the outer surface being in the range of 10,000 to 150,000 pores per mm^2 .
2. (Previously Presented) A membrane according to claim 1, wherein said membrane has a four layer structure comprising a first inner separation layer in the form of a dense rather thin layer, a second layer in the form of a sponge structure, a third layer in the form of a finger structure, and a fourth outer layer in the form of a sponge layer having an outer surface having pores with sizes in the range of 0.5-3 μm , the number of said pores on the outer surface of the sponge layer being in the range of 10,000 to 150,000 pores per mm^2 .
3. (Original) A membrane according to claim 2, wherein said membrane has a diffusive permeability of urea of $15\text{-}17 \times 10^{-4}$ cm/sec measured at 37°C.
4. (Previously Presented) A membrane according to claim 2 or claim 3, wherein said first separation layer has a thickness less than 1 μm , said second layer has a thickness of about 1 to 15 μm , said third layer has a thickness of about 20 to 60 μm , and said fourth outer layer has a thickness of about 1 to 10 μm .

5. (Previously Presented) A membrane according to claim 1, wherein said membrane is 65-95% by weight of said at least one hydrophobic polymer and 5-35% by weight of said at least one hydrophilic polymer.

6. (Previously Presented) A membrane according to claim 1, wherein said at least one hydrophobic polymer is chosen from a group of polymers consisting of polyamide (PA), polyaramide (PAA), polyarylethersulphone (PAES), polyethersulphone (PES), polysulphone (PSU), polyarylsulphone (PASU), polycarbonate (PC), polyether, polyurethane (PUR), polyetherimide, and copolymers of said polymers.

7. (Previously Presented) A membrane according to one of claims 1 or 6, wherein the at least one hydrophilic polymer is chosen from the group consisting of polyvinylpyrrolidone (PVP), polyethylene glycol (PEG), polyglycolmonoester, water soluble cellulosic derivates, polysorbate, and polyethylene-polypropylene oxide copolymers.

8. (Withdrawn) A process for preparing a membrane according to claim 1 by solvent phase inversion spinning, comprising the steps of:

dissolving said at least one hydrophobic polymer and said at least one hydrophilic polymer in at least one solvent to form a polymer solution,

extruding said formed polymer solution through an outer ring slit of a nozzle with two concentric openings,

extruding a center fluid through the inner opening of the nozzle, and

washing said membrane, wherein the polymer solution coming out through the outer slit opening is, on the outside of the precipitating fiber, exposed to a humid

steam/air mixture comprising a solvent in a content of between 0.5 and 10% by weight related to the water content.

9. (Withdrawn) A process according to claim 8, wherein the solvent content within the humid steam/air mixture is between 0.5 and 5% by weight related to the water content.

10. (Withdrawn) A process according to claim 8, wherein the solvent content within the humid steam/air mixture is between 2 and 3% by weight related to the water content.

11. (Withdrawn) A process according to claim 8, wherein the temperature of the humid steam/air mixture is at least 15°C and not more than 75°C.

12. (Withdrawn) A process according to claim 8, wherein the relative humidity in the humid steam/air mixture is between 60 and 100%.

13. (Withdrawn) A process according to claim 8, wherein the polymer solution consists of 10-20% by weight of the at least one hydrophobic polymer, 3-11% by weight of the at least one hydrophilic polymer, 66-86 % by weight solvent, and 1-5 % by weight suitable additives.

14. (Withdrawn) A process according to claim 8, wherein the polymer solution comprises 1-5% by weight coagulation fluid chosen from the group of water, glycerol, and other alcohols.

15. (Withdrawn) A process according to claim 8, wherein said solvent is chosen from the group comprising n-methylpyrrolidon (NMP), dimethylacetamide (DMAC), dimethylsulphoxide (DMSO), dimethylformamide (DMF), butyrolactone, and mixtures of said solvents.

16. (Withdrawn) A process according to claim 8, wherein said center fluid includes a part of said at least one hydrophilic polymer.

17. (Withdrawn) A process according to claim 8, wherein said center fluid includes at least one solvent chosen from the group comprising n-methylpyrrolidone (NMP), dimethylacetamide (DMAC), dimethylsulphoxide (DMSO), dimethylformamide (DMF), butyrolactone, and mixtures of said solvents.

18. (Withdrawn) A process according to claim 8, wherein said center fluid includes precipitation medium chosen from the group water, glycerol, and other alcohols.

19. (Withdrawn) A process according to claim 8, wherein said center fluid consist of 45-70% by weight precipitation medium, 30-55% by weight solvent, and 0-5% by weight said at least one hydrophilic polymer.

20. (Previously Presented) A membrane according to claim 1 configured for hemodiafiltration and hemofiltration.

21. (Previously Presented) A membrane according to claim 1 configured for dialysis and filtration.

22. (Currently Amended) A membrane manufactured ~~according to the process of claim 8, by solvent phase inversion spinning, wherein said solvent phase inversion spinning comprises the steps of:~~

dissolving said at least one hydrophobic polymer and said at least one hydrophilic polymer in at least one solvent to form a polymer solution,

extruding said formed polymer solution through an outer ring slit of a nozzle with two concentric openings,

extruding a center fluid through the inner opening of the nozzle, and
washing said membrane, wherein the polymer solution coming out through the
outer slit opening is, on the outside of the precipitating fiber, exposed to a humid
steam/air mixture comprising a solvent in a content of between 0.5 and 10% by weight
related to the water content, said membrane being configured for hemodiafiltration and
hemofiltration.

23. (Currently Amended) A membrane manufactured ~~according to the~~
~~process of claim 8,~~ by solvent phase inversion spinning, wherein said solvent phase
inversion spinning comprises the steps of:

dissolving said at least one hydrophobic polymer and said at least one
hydrophilic polymer in at least one solvent to form a polymer solution,

extruding said formed polymer solution through an outer ring slit of a nozzle with
two concentric openings,

extruding a center fluid through the inner opening of the nozzle, and
washing said membrane, wherein the polymer solution coming out through the
outer slit opening is, on the outside of the precipitating fiber, exposed to a humid
steam/air mixture comprising a solvent in a content of between 0.5 and 10% by weight
related to the water content, said membrane configured for dialysis and filtration.

24. (Previously Presented) A membrane according to claim 1, wherein the
density of pores on the outer surface are in the range of 18,000 to 100,000 pores per
mm².

25. (Previously Presented) A membrane according to claim 1, wherein the density of pores on the outer surface are in the range of 20,000 to 100,000 pores per mm^2 .

26. (Withdrawn) A process according to claim 8, wherein the membrane is dried following the washing step.

27. (Withdrawn) A process according to claim 8, wherein the temperature of the humid steam/air mixture is at least 30°C and not greater than 60°C .